Autonomous Towed Howitzer Ordnance System (ATHOS)

Autonomous Towed Gun 155mm/52 Caliber with automated ammunition loading system

The Elbit Systems' state-of-the-art Autonomous Towed Howitzer Ordnance System (ATHOS) is a long-range 155mm/52 caliber gun. The ATHOS is the next-generation of Elbit Systems' towed-independent guns, providing armies around the globe with a highly maneuverable, field artillery solution. The ATHOS has been field-tested for accuracy, stability and reliability during moving and firing maneuvers, and is based on in-service systems and components.

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Fully autonomous and maneuverable system - The ATHOS is capable of a range of more than 40km and utilizes a self-propelling capability and automatic laying mode. It is integrated with fully-computerized systems, achieving automatic control, accurate navigation, and target acquisition. When deployed in the battlefield, the ATHOS can maneuver itself using its own diesel engine and special hydraulic-driven road wheels, which are also ideal for shoot-and scoot positioning. The hydraulic system enables a team of seven crew members or less to easily deploy the ATHOS within minutes.

Advanced weapon system for effective firepower - The ATHOS utilizes inertial navigation and aiming systems - including a GPS and an onboard firing computer - as part of its autonomous capabilities. The gun laying is performed using the INS without any external reference point. The laying system can be slaved to the computer to achieve automatic laying.

Robust solution for superior battlefield operation - The ATHOS is designed to operate under harsh environmental conditions, using all qualified 155mm ammunition in use worldwide. To ease the crew's workload and enhance gun performance, the ATHOS is equipped with an ammunition loader that dramatically reduces the physical force needed to operate the gun.

Features

- Fully automatic operation with manual back-up
- Integrated with complete electronic suite from gun level and up
- Integrated with system command and control at all levels including FDC'S and FCS
- Rapid deployment and short response time
- Long range, with all 155mm/52 caliber ammunition
- Massive and accurate fire power
- Integrated logistic support and all level maintenance program
- Self-maneuverable artillery howitzer with automated ammunition loading system

Operational Characteristics

Direct fire	Day	> 1.5km
	Night	> 1km
Indirect fire	With HE standard ammunition (ERFB-BT)	> 30km
	With assisted HE (ERFB-BB Base Bleed) ammunition	> 40km
	Minimum range	< 5km

Ammunition Loading System

The ATHOS automated ammunition loading system consists of a loading tray, a ramming mechanism, and a crane with a projectile carrier. The system supports a range of firing rates:

Burst rate	3 rounds in 30 seconds
Intense rate	12 rounds in 3 minutes
Sustained rate	42 rounds in 60 minutes

Electronic System

The ATHOS electronic system - control, computation, navigation, and aiming - includes inertial navigation and aiming systems, an onboard firing computer, a laying system, optical backup sights, and other control units.

Carriage Assembly

The carriage is the main support of the weapon, both in action and during transport. The carriage consists of a central structure with a main bearing, trails, and road wheels. The carriage carries all the auxiliary propulsion-unit components, including the driver's compartment. The Auxiliary Propulsion Unit (APU) supplies continuous energy to the automotive, hydraulic and electric systems, enabling autonomous system operation and short reaction going into or out of action.

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